

Principal	Project Title	City	Committed Funding	Committed Match	Project Facts and Benefits to Iowa
BIOFUELS					
POET Project Liberty	POET Project Liberty	Emmetsburg	\$14,750,000	\$231,400,000	Project LIBERTY is the transformation of the traditional ethanol biorefinery in Emmetsburg into an integrated corn-to-ethanol and cellulose-to-ethanol biorefinery. The biorefinery technology is the result of ongoing research and development conducted at POET. Key objectives of Project LIBERTY are to validate the technology and economics at commercial scale and enable replication at other biorefineries in Iowa and across the country. The rollout of LIBERTY technologies will help the nation rapidly advance toward its biofuels mandate and reduce its dependency on foreign oil. The feedstock for the cellulosic portion of the biorefinery will be a mix of corn fiber from the corn kernel and corn cobs.
Fiberight-Blairstown Operating, LLC	Turning waste into advanced biofuels on a commercial scale	Blairstown	\$2,900,000	\$4,160,750	The Blairstown project will demonstrate how non-homogeneous municipal solid waste (MSW) can be converted into cellulosic ethanol, biochemicals, and other processed fiber products using a proprietary biochemical technology on a highly cost efficient, commercial production scale. The project will validate Fiberight's core conversion processes that can turn each processed ton of non-recycled contaminated paper, food waste, yard discards, and other degradables into 85 gallons of advanced biofuel. The biorefinery technology involves specialized pre-sorting, pre-treatment, enzymatic digestion, fermentation, and the recycling of enzymes that have already been tested by Fiberight at the pilot plant level. Fiberight has commenced demonstration-level production of cellulosic ethanol (750,000 gy capacity) and renewable biofuel from waste sugar sources at the Blairstown facility with current equity resources. Fiberight will utilize its Iowa Power Fund grant to relocate its front-end operations from Lawrenceville, VA to Blairstown and to install additional processing equipment. The fully integrated plant will then be able to prove the technology at an increased pre-commercial scale using municipal solid waste from local Iowa landfills, beginning with Benton County waste.
ISU	Clean Gasification Platform for Renewable Power	Ames	\$2,370,000	\$922,112	The goal of this project is developing more efficient gas and syngas burners and technology to produce ethanol from synthesis gas. If successful, the resulting biomass gasification technology could be commercialized for thermal energy or for combined heat and power generation without compromising clean air standards.
Green Plains Renewable Energy and Bioprocess Algae LLC	Algae Project	Shenandoah	\$2,084,989	\$2,084,989	The Green Plains Renewable Energy and Bioprocess Algae, LLC project addressed the affordable feedstock availability for the biofuel industry. This project used breakthrough technology developed by BioProcess Algae for the mass production of a non food vs. fuel feedstock: algae. The inputs for the mass production of algae were the waste products from an ethanol plant, carbon dioxide and waste water. The project identified the natural algae to be used in our climate and verified that these algae have the ability to produce continuously at a level in excess of 200 tons per acre per year. With this level of production and a 30% oil extraction rate, a 50 million gallon a year ethanol plant would expect to produce enough oil for the annual production of 5.8 million gallons of biodiesel and 51,000 tons of a high protein meal product. We believe with the elimination of oil from this protein meal product, this product would be to the poultry and swine business what dried distillers grains have been to the cattle industry.

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Cellencor Inc.	Reducing the Energy and Environmental Costs of Drying Corn Distillers Grain	Ames	\$1,500,000	\$500,000	Cellencor, in association with Iowa Corn Growers Association, is developing process technology that replaces natural gas or coal powered dryers of Distillers Dried Grains with Solubles (DDGS) at new or existing ethanol production plants with efficient, high-powered microwave drying systems. The process should produce substantial energy savings, higher value DDGS for animal feeds, and significant environmental benefits including reduced emissions of greenhouse gases, particulates, volatile organic compounds (VOCs), and odors. The process should also reduce plant water consumption by up to 25%. The process should represent a significant improvement of the corn-to-ethanol economic model and energy balance.

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Renewable Energy Group (REG)	Biodiesel Research Center	Ames	\$739,963	\$1,374,000	The Biodiesel Research Center was created to focus on three immediate problems impacting the biodiesel industry. These problems were well known by industry producers and highly publicized in the general media but adequate research data was not available. These problems included determining ASTM standards for alternative feedstocks, determining best methods for understanding moisture levels, and best methods for removing soap and sterol glycosides in biodiesel. These developments could lead to enhanced energy independence within the State of Iowa as existing biodiesel production capacity exists but is not being utilized.
ISU	Increasing the use of distillers grains in livestock diets: Decreasing the impact of insoluble fiber, antibiotics, and sulfate in swine, poultry, and cattle diets	Ames	\$172,994	\$242,334	Since 1999, there has been a 265% growth in ethanol production, with much of it centered in Iowa and surrounding states. Production of ethanol by-products in the U. S. has increased as well. Iowa ethanol plants currently produce about 4.3 million tons of distillers grains. Distillers grains are rich in protein and energy and are an economical feedstuff; however, some nutritional factors limit their inclusion in livestock diets. Distillers grains contain a relatively high content of insoluble fiber, which is not readily digested by non-ruminants, thus limiting their use in swine and poultry diets. Yeast cell wall components and antibiotics used to manipulate growth of ethanol-producing yeast in ethanol plants show up in the feed. Yeast cell wall components may be beneficial, but antibiotics can exceed legal limits in swine and poultry diets. High sulfate content of distillers grains can cause a neurological disorder when large amounts are fed to ruminants, thus use of distillers grains as a beef and dairy feedstuff is limited. We propose distillers grains feeding studies for swine, poultry, and cattle to address strategies to overcome the insoluble fiber, antibiotic, and sulfur limitations, respectively, thus increasing the use of distillers grains in livestock diets may be increased.
Novecta, LLC	Utilizing Glycerol in Swine and Poultry	Johnston	\$66,550	\$66,550	This project consisted of four experiments designed to research the practical issues surrounding the handling and feeding of glycerol. Research from the project should result in the establishment of guidelines for feed manufacturers to ensure acceptable feed quality. Determining the feeding value of glycerol compared to more expensive ingredients should also aid nutritionists in incorporating glycerol in swine and poultry diets. The project sought to increase the demand for glycerol and provide increased economic competitiveness for biodiesel plants in Iowa.
Iowa Biodiesel Board	Biodiesel Education Program	Urbandale	\$50,000	\$95,000	This program aims to dispel myths, provide solid information, and remove barriers to greater biodiesel acceptance in Iowa among diesel mechanics, and, therefore, the consuming public. Working collaboratively with One Source Training, IBB aims to arm the diesel mechanics and renewable fuels instructors at 15 community colleges across Iowa with a biodiesel curriculum that can be implemented in their courses. Additionally, IBB will hold continuing education seminars with the target audience of diesel mechanics in Iowa. Instructors for these sessions will likely be the same community college instructors. Prior to implementation, IBB will develop a curriculum sufficient to the task and will hold a train-the-trainer session which will allow the instructors to learn the curriculum and be provided an opportunity to ask questions of industry experts. A survey of attitudes and knowledge of biodiesel will be implemented both pre and post education so that the effectiveness of the training can be measured, as well as get feedback from the course participants as to opportunities for improvement.

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ISU	2008 Biobased Industry Outlook Conference	Ames	\$12,500	\$325,000	The 2008 Growing the Bioeconomy Conference was the 6th annual conference held at Iowa State University that focused on the latest advances in biofeedstock production, bioprocessing, utilization of biobased products, human, social and community dimensions of the bioeconomy, and the interface between the bioeconomy and climate change. The 2008 conference focused on technologies and strategies that will allow the Midwest to achieve the goals identified by the Midwestern Governors Coalition (MGC), North Central Bioeconomy Consortium (NCBC), the North Central Sun Grant (NCSG), and USDA REE.
Easy Energy Systems	Cellulosic Modular Ethanol Production	Emmetsburg	\$500,000	\$300,000	Easy Energy Systems, Inc. has developed the Modular Ethanol Production System (MEPS) for the conversion of various feedstocks into ethanol. Several of these feedstocks are cellulosic materials found throughout Iowa. Easy Energy Systems is proposing to add the necessary equipment to the already existing prototype facility in Emmetsburg that can process cellulosic materials and convert them to cellulosic ethanol in a continuously operating plant. Along with developing the MEPS technology, Easy Energy Systems has partnered closely with Zymetis, an industry-leading enzyme company that has developed an organism that efficiently breaks down cellulosic materials for conversion to ethanol. By combining the two technologies at the prototype facility in Emmetsburg, Easy Energy Systems will lead the charge into the cellulosic ethanol market. If successful Easy Energy Systems, Inc. plans to manufacture modular ethanol production units at its Emmetsburg plant near its pilot plant.
BioProcess Algae	BioProcess Algae Project, Phase II	Shenandoah	\$2,030,644	\$2,654,456	Phase 2 of the BioProcess Algae (BPA) project will build on the success of the Phase 1 concept. The Phase 1 project was a proof of the scalability of the BioProcess Algae Grower/Harvester photo-bioreactor system. The project demonstrated the proof of concept that carbon dioxide could be mitigated through the mass production of algae. Phase 2 will continue to prove scalability by a scale jump of 18 times in production volume. Phase 2 will build on Phase 1 efforts to optimize growth of algae in the BPA Grower/Harvesters through improved utilization of light, more efficient carbon dioxide absorption, and enhanced dewatering and water re-use. Phase 2 will also allow for verification of growth rates, energy balances, and operating expenses, which BPA considers a few of the last steps prior to full economic modeling and commercialization. Once the economic viability of large scale algae farming is proven, BioProcess Algae would move to make GPRE's Shenandoah facility the very first ethanol/algae plant in the world.
AmbroZea, Inc.	Optimizing Multi-Tasking Yeast for Iowa's Ethanol Industry	Ames	\$1,500,000	\$14,500,000	The University of Iowa's Center for Biocatalysis & Bioprocessing (CBB) and Iowa State University's animal researchers have teamed up with AmbroZea and its partners to apply high-protein expression biotechnology to further optimize AmbroZea's multi-tasking yeast (<i>S. cerevisiae</i>) for commercial deployment in Iowa's fuel-ethanol industry. Multi-tasking yeast produce ethanol and high-value co-products (e.g. essential amino acids) that can convert existing ethanol plants into multi-product biorefineries. In addition, multi-tasking yeast will be deployed in new C6-sugar cellulosic biorefineries. The remaining hemi-cellulose and lignin will be used in onsite combined heat and power (CHP) generation to support operations, make the process carbon neutral, and sell excess electricity to the grid to provide an additional revenue stream. About one-third of Iowa's stover could be used in 34 new 50MMgy C6-sugar cellulosic biorefineries.
Biofuels Total			\$28,677,640	\$258,625,191	

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WIND					
Iowa Stored Energy Park	Iowa Stored Energy Park	Dallas Center	\$3,200,000	\$2,000,000	The Iowa Stored Energy Park (ISEP) will be the nation's first Compressed Air Energy Storage ("CAES") facility to use a natural underground reservoir for compressed air energy storage from wind energy. Two other CAES plants have been operating for many years (one in Hundorf, Germany, and one in McIntosh, Alabama). ISEP will use a natural underground aquifer for air storage. Iowa has abundant wind resources; however, the variable and uncontrollable output of wind energy limits the amount of wind generating capacity that can be incorporated into the electric grid. The primary purpose of the ISEP is to provide an energy storage system to enable Iowa to integrate and use more of the wind energy. Air will be compressed and stored in an underground aquifer using inexpensive off-peak electricity from wind turbines and from the grid. When power is wanted, the compressed air is released to drive combustion turbines. Fuel for these combustion turbines will be natural gas or, if it is determined to be feasible, biofuels. These modified combustion turbines use much less fuel than other turbines since the air has already been compressed off-peak and because of the advanced heat recovery equipment. Other efficiencies are gained by utilizing off-peak energy from wind turbines and other base load units for compressing air at night.
University of Iowa	Iowa Alliance for Wind Innovation & Novel Development (IAWIND)	Iowa City	\$3,000,000	\$1,950,000	IAWIND is implementing research and training components to realize the scope of university-based, large-scale gearbox testing facilities to support the continued growth of turbine component manufacturing in Iowa. By doing this, IAWIND is supporting the State of Iowa in its efforts to continue to attract and nurture wind energy and related industries, and to become the national leader in alternative energy technologies.
TPI Iowa LLC	TPI Wind Blade Advanced Manufacturing Initiative	Newton	\$2,100,000	\$4,200,000	This project is working to foster the mass production of wind turbines in Iowa. Through improving labor productivity in wind manufacturing by up to 35%, this project will increase manufacturing with an Advanced Manufacturing Innovation Initiative. The results would be more employment opportunities in the state along with better-paying and technically-challenging employment possibilities. The project collaborates with both Iowa State University and the Sandia National Laboratories.
Carbon-Free Energy, LLC	Vertical Wind Turbine Manufacturer	Oxford	\$250,000	\$171,885	Carbon-Free Energy is a small-scale wind turbine start-up company. Their vertical orientation wind turbine is well suited to residential, farming, and small commercial market segments. A patent applied for technology has increased vane RPMs by 207% in wind tunnel tests with a scale model. Their proprietary generator design produces electricity in light wind speeds and can also take advantage of very high wind speeds, unlike wind turbines with a horizontal orientation.
Wind Total			\$8,550,000	\$8,321,885	
SOLAR					
ISU	Efficient, Low Cost, Photovoltaic Solar Energy Conversion	Ames	\$1,690,024	\$463,500	This project seeks to increase the conversion efficiency of thin film solar cells while also keeping their manufacturing costs relatively low. The goal is to produce electric power directly from sunlight without any fossil fuel consumption. This project would allow solar energy to become more cost-competitive with other forms of energy and would help to spur economic development in the solar energy sector.
UNI	Development of Less Expensive Dye Sensitized Solar Cells	Cedar Falls	\$78,681	\$18,600	This project seeks to develop a cheaper solar cell based on dye sensitized solar cell technology. Less expensive dyes are expected to be developed and their solar efficiency will then be tested. Once studies are completed, the research will be incorporated into an economically feasible device for sale to the general public.
Solar Total			\$1,768,705	\$482,100	

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ENERGY EFFICIENCY					
City of Dubuque	Sustainable Communities Through Integrated Information Technology	Dubuque	\$1,400,000	\$13,700,000	The City of Dubuque is creating an Integrated Sustainability Service model for measurement and monitoring of its energy and water systems, infrastructure components, and transportation networks with assistance from IBM. This system will allow City management and electric utility customers to track energy usage on a near real-time basis, track the impact of utilization changes, analyze the effectiveness of system design and incentives, and begin the process for cross-analytics with water and carbon utilization. The system will enable the City and its citizens to visualize and understand electric consumption patterns and the sustainability footprint of the community, as well as provide cross-analytics for all related areas of energy consumption within the community.
DED/DNR	AmeriCorps Green Corps Program	Des Moines	\$450,000	\$876,850	AmeriCorps is financing equipment, materials, and labor for this GreenCorps project. The project will leverage \$1,161,850 from the National Corporation for Community Service. These additional funds will be dispensed by the Iowa Commission on Volunteer Service for energy efficient rebuilding of areas of Iowa that were affected with natural disasters in the summer of 2008. AmeriCorps pledges to conduct at least fifty energy conservation and efficiency education programs per year. Additionally, they will implement or advise property owners on energy efficiency and weatherization improvements for approximately 350 homes and businesses per year. Finally, they agree to recruit at least 1,000 volunteer labor hours per year in flood affected communities.
Tri-Phase Drying Technologies	First Commercial Application of an Ultra Energy Efficient Industrial Drying Technology	Cherokee	\$300,000	\$329,277	Tri-Phase Drying Technologies proposes to install the first full-scale commercial Tri-Phase II Dryer at American Natural Soy, an organic processor of oils, flour, and meal from soy, flax, canola, safflower, and sunflower seeds. The project includes the final design, build, installation, and monitoring of the energy-efficient dryer. The new dryer will consume approximately 750 BTU when operated at 65 degrees F to evaporate one pound of water from 113 bushels of soybeans per hour. The new technology replaces the current inefficient dryer which consumes approximately 4,000 BTU, thus saving approximately \$15,000-20,000 per year and reducing CO2 emissions by 220 tons per year.
City of Fairfield	Making Iowa's Cities Sustainable: The Fairfield Model for Energy Security and Economic Viability	Fairfield	\$80,000	\$44,800	The City of Fairfield is undertaking a sustainable city demonstration project, based on the goals of energy independence, community-based energy solutions, carbon neutrality, and a durable economic future. This multi-year project begins with a Phase 1 program of strategic planning for sustainability that incorporates an ongoing educational program and a new facility. Using the 'Fairfield Model' of integrating grassroots initiatives with formal city planning, the planning process engages a citizen commission in addressing the full range of sustainability issues, including: power, housing, transportation, industrial processes, waste management, and food. The Planning Commission includes representatives of all major stakeholders: citizens, business owners, city government, agriculture, and nonprofit institutions. To inform the planning process, two studies will be conducted: 1) identification of baseline data on energy use and green house gas (GHG) emissions by source and by sector; and 2) identification of opportunities for utilizing renewable resources. To provide critical educational support for the planning and implementation of sustainable solutions at the community and state levels, a Sustainability Learning and Visitor's Center will be built and utilized for short courses, for in-resident internships in sustainability, and to serve as a focal point for regional eco-tourism, highlighting Iowa's leading position in natural resource management. Importantly, this project serves to both move Fairfield into energy independence and sustainability and to provide a state-wide model from which other rural communities in Iowa can learn and emulate.

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Indigo Dawn	Green and Main: Model Energy Building	Des Moines	\$225,000	\$1,868,400	Use a renovated mixed-use masonry building that will apply for LEED Platinum certification as an energy efficiency case study and community educational tool.
Energy Efficiency Total			\$2,455,000	\$16,819,327	

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BIOMASS					
Amana Farms, Inc.	Amana Renewable Energy Project	Amana	\$1,082,575	\$4,077,449	This project aims to produce alternative renewable energy by combining cattle manure with organic industrial waste products in an anaerobic digester. The digester is expected to produce methane gas which would fire an engine set to generate base load electricity. This would create environmental benefits by turning crop, livestock, and industrial waste into renewable energy in a sustainable and profitable way. Other benefits of the project include the production of a fertilizer that is more readily applicable to crops than in its raw form.
UNI	Determining Maximum Sustainable Production of Biomass with Mixture of Prairie Species	Cedar Falls	\$612,300	\$136,000	The Tallgrass Prairie Center is researching how to better use prairies for wildlife cover and for energy production. Their research seeks to show the optimal mixture of native prairie vegetation for maximum biomass production on non-prime agricultural land for electrical generation. It will also determine the most effective management plans for sustainable use of prairie vegetation for biomass production while maintaining wildlife habitats and other benefits. If successful, the project will accelerate research and development, knowledge transfer, technology innovation, and improve the economic competitiveness of current efforts in the field.
Hybrid Power Centers, LLC	Hybrid Power Center	Des Moines	\$325,000	\$350,000	Hybrid Power Centers LLC's core strategy involves coupling two or more fuel sources into one power plant. The primary technology under development is a hybrid power plant that would combust both coal and biomass in a single integrated system. A technological advance review analysis demonstrates that the concept is viable using existing technology, can meet baseload energy needs at industrial scale, and can do so in a cost-efficient, environmentally friendly manner that returns investment to Iowa.
City of Cedar Rapids	21st Century Green Energy Project	Cedar Rapids	\$139,921	\$139,921	The 21st Century Green Energy Project Feasibility Study hopes to determine a path forward to implement a solution to critical, post-flood energy system issues in Cedar Rapids. Initially conceived as a study to determine proof-of-concept and viability for a renewable fuel-powered energy system in Cedar Rapids, the scope and importance of the study have grown to include in-depth analysis of a range of energy solutions to replace the flood-damaged steam plant. Much effort has been expended by a variety of groups in the struggle to find both temporary and long-term solutions to the energy issue, but agreement on a path forward has not been reached due to a lack of clear and concise information that presents the full economic, environmental, and social implications of the various options. The study is bringing all of these elements together to provide a comparative analysis of the energy options and provide the basis for a community decision.
RENEW Energy Systems	Mobile Solid Biomass Briquette Plant	Osage	\$250,000	\$627,000	RENEW Energy Systems has constructed a facility and is in the process of installing a C.F. Nielsen biomass briquette machine at the St. Ansgar, IA facility. The facility includes a loading platform(constructed), grinder (on-site), briquette machine (on-site), cooling racks (on-site), shipping capability, and office space (under construction) for the biomass briquetting operation. Once operational, the facility should be able to process 36 tons of biomass per day. This plant will process oat hulls, wood, corn stover, and meat casings and other materials that would have potentially been land-filled had they not been diverted into biomass briquettes. Most of the feedstock materials will come from Mason City, Clear Lake, Osage, and St. Ansgar. The St. Ansgar facility should be up and operational by January 1, 2010. RENEW has agreements in place with feedstock providers for wood waste, oat hulls, and corn stover. The company also has agreements in place with companies willing to purchase biomass briquettes. In addition to the facility at St. Ansgar, RENEW is also creating a briquetting facility in Newton, IA. This facility will take diatomaceous earth from the REG Biodiesel plant, in addition to wood waste in the area. This facility is expected to be up and operational by January 31, 2011.

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Avello Bioenergy, Inc.	Demonstration of Pyrolysis Based Biorefinery Concept for Biopower, Biomaterials, & Biochar	Boone	\$2,500,000	\$4,644,406	This project will demonstrate and advance the commercialization of biomass to produce bio-based petroleum replacements for asphalt pavements and roofing shingles, fuels for clean power generation, chemicals and soil improvement while providing carbon sequestration opportunities. A team of industry and academia partners will join Avello Bioenergy to build a demonstration scale biomass fast pyrolysis plant to supply renewable industrial fuels and bio-products for full-scale pre-commercial tests and market development. The 3-year project includes design, construction and operation of a 2.5 dry ton/day biomass thermal conversion facility at the Iowa State University BioCentury Research Farm (BCRF) and commercial testing of Bioasphalt™, Biofuel Oil™, Biochar and other bio-based products. The production of semi-commercial quantities of products will allow commercial partners to conduct asphalt paving and roofing trials, combustion studies, and chemical and biofuel application screening tests over a 2-year period. Iowa State University professors and students will also be conducting R&D work in parallel to provide laboratory data for commercial partners.
SynGest Menlo, LLC	BioAmmonia Production from Biomass	Menlo	\$2,500,000	\$3,500,000	This project will consist of supporting the Front End Engineering and Design (FEED) stage for the SynGest BioAmmonia technology. The project will translate a series of Process Flow Diagrams (PFDs) into specific equipment specifications for unit operation, plumbing, piping, pumps and compressors and will incorporate the final vendor selection as appropriate. Additionally an accurate capital cost estimate (+/- 10%) as well as an accurate projected operating cost will be developed.
Biomass Total			\$7,409,796	\$13,474,776	

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TRANSPORTATION					
UNI	Novel Hydrogen Storage Materials for Fuel Cell Application	Cedar Falls	\$400,000	\$165,000	The University of Northern Iowa's Novel Hydrogen Storage Materials for Fuel Cell Application involves the development of a high density storage material for use in hydrogen fuel cells. The chosen class of materials for investigation represents a novel approach to an issue of great interest at both the state and national levels. An economically competitive hydrogen fuel cell would revolutionize the energy storage industry and make possible a new class of pollution free vehicles. The potential applications represent a vast opportunity, ranging from electronics to large scale industrial machinery. Development of a high density storage matrix for hydrogen is the critical step to making fuel cells competitive on the commercial market.
Consumers Energy Cooperative	Plug-in Electric Hybrid (PHEV)	Marshalltown	\$19,000	\$81,205	Consumers Energy has purchased and retrofitted a standard hybrid electric vehicle (HEV) and converted it into a Plug-in Electric Vehicle (PHEV) that can be charged using a standard electrical outlet. They are testing and monitoring the vehicle to determine its performance level in Iowa's climate. They are also working to assess the viability of converting internal combustion engine (ICE) fleets to PHEV.
Transportation Total			\$419,000	\$246,205	
OTHER					
Trees Forever, Inc.	Community Education on Energy and Environmental Benefits from Green Infrastructure	Marion	\$232,249	\$738,401	Trees Forever is working with ten communities that were impacted by natural disasters to develop long-term tree planting efforts that maximize energy savings and carbon sequestration. The recent natural disasters took a heavy toll on thousands of mature urban trees throughout the state. This Power Fund project engages volunteers, students, and city leaders in selected communities to replant and grow their urban tree canopy by identifying optimum sites available, choosing from a list of large benefit-producing shade tree species, and developing long-term management and maintenance plans. By restoring their community forests, Iowans will reduce their energy consumption and carbon footprint as trees shade homes and businesses in the summer, provide protection from winter winds, and take in and store carbon dioxide. Even more impressive is that these benefits grow exponentially over time, impacting generations to come.
UNI	Annual Iowa Energy Poll	Cedar Falls	\$51,455	\$0	The Iowa Energy Poll collected, analyzed, and presented unbiased data regarding the opinions of Iowans on energy. The surveys showed how Iowans currently feel about state energy policies and what drives them to make the decisions they do about their own energy usage. Three separate mailings to 7,000 households targeted 21,000 Iowa residents in the course of this project. Subsequent surveys measured changes in attitudes and behaviors and the impact of newly adopted policies, programs, and activities implemented since the initial survey to determine effectiveness and return on investment.
I-Renew	I-Renew Energy & Sustainability EXPO 2008	Iowa City	\$41,000	\$52,000	The Iowa Renewable Energy Association (I-Renew) started 17 years ago by hosting its first ever I-Renew Energy EXPO. Thousands of Iowans have attended I-Renew's EXPOs throughout the last 16 years, many learning about energy issues for the first time. The EXPO is now an important event for new businesses in energy efficiency and renewable energy to recruit new customers, for energy experts to network with others, and for consumers to learn about these issues from the most basic to advanced levels. The EXPO opens the door to future conservation for interested parties - those who have been affected by high gas prices, those whose interest in energy may have been stimulated by media, and those who come already eager to learn ways to conserve energy.

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I-Renew	I-Renew Energy & Sustainability Expo 2009	Iowa City	\$30,000	\$110,000	The Iowa Renewable Energy Association (I-Renew), which started 18 years ago, hosted the I-Renew Energy EXPO for 2009. The event is important for new businesses in energy efficiency and renewable energy to network with others, recruit new customers, and for consumers to learn about energy issues from the beginning levels to the advanced.
Iowa Environmental Council	Energy Independence Education Project	Des Moines	\$20,000	\$64,300	The Iowa Environmental Council, in collaboration with Iowa State University and University of Iowa, will bring author and speaker Bill McKibben to Iowa for three days to speak in Ames, Des Moines, and Iowa City. He will focus on renewable energy and energy efficiency as solutions to mitigate energy usage and enhance energy independence.
Iowa Regents' Universities (ISU)	Harnessing Energy Flows in the Biosphere	Ames	\$2,000,000	\$20,000,000	The three Regents' Universities submitted a grant application to the National Science Foundation (NSF) Experimental Program to Stimulate Competitive Research (EPSCoR) in September, 2010. The award of this Power Fund Grant is contingent upon receipt of \$20 million from the NSF. The goal of this project is long-term economic development in Iowa through expansion of the state's research capacity in renewable energy technologies. The project's scientific program consists of research related to wind, solar, bioenergy and energy efficiency conducted by interdisciplinary teams of faculty from the Regents' Universities who will interact with Iowa's community colleges, private colleges, state agencies and companies. The broader impacts of the project address state-wide issues of diversity in scientific participation and education, workforce development and communication and outreach.
Other Total			\$2,374,704	\$20,964,701	
IPF APPROVED PROJECTS TOTAL			\$51,654,845	\$318,934,185	